IN THE CLAIMS:

Please amend Claims 4 and 22 as follows.

1. (Original) A method of PECVD depositing an a-SiN_x :H dielectric film useful in a TFT device as gate dielectric, when a series of TFT devices are arrayed over a substrate having a surface area larger than about 1 m^2, said method comprising:

depositing said a-SiN_x :H dielectric film over a substrate which is at a temperature ranging from about 120 °C to about 340 °C;

depositing said a-SiN_x :H dielectric film at a process pressure which ranges between about 1.0 Torr to about 2.0 Torr;

depositing said a-SiN_x :H dielectric film from precursors including N_2, NH_3, and SiH4, and wherein a component ratio of NH_3/SiH_4 ranges from about 5.3 to about 10.0, a component ratio of N_2/SiH_4 ranges from about 5.5 to about 18.7, and a component ratio of N_2/NH_3 ranges from about 0.6 to about 2.3; and

applying a plasma to a mixture of said precursors, so that the plasma density in a process chamber in which said a-SiN_x :H dielectric film is deposited ranges between about 0.2 W/cm^2 and about 0.6 W/cm^2.

2. (Original) A method in accordance with Claim 1, wherein an electrode spacing in said process chamber ranges from about 400 mils to about 1000 mils.

3. (Original) A method in accordance with Claim 1 or Claim 2, wherein said substrate temperature ranges from about 240 °C to about 320 °C.

4. (Currently Amended) A method in accordance with Claim 1 or Claim 2, wherein said pressure in said process chamber ~~is less than~~ ranges from about 1.0 Torr to about 1.5 Torr.

5. (Original) A method in accordance with Claim 1, wherein said substrate surface area is larger than about 2.7 m^2.

6. (Original) A method in accordance with Claim 5, wherein said substrate surface area is larger than about 4.1 m^2.

7. (Original) A method in accordance with Claim 6, wherein said substrate surface area is larger than about 9.0 m^2.

8. (Original) A method in accordance with Claim 1, wherein said substrate surface area ranges between about 1.0 m^2 and about 4.1 m^2.

9. (Original) A method in accordance with Claim 1, wherein a deposition rate of said a-SiN_x:H dielectric film is at least 1000 Å/min.

10. (Original) A method in accordance with Claim 9, wherein said deposition rate is at least 1300 Å/min.

11. (Original) A method in accordance with Claim 10, wherein said deposition rate is at least 1,600 Å/min.

12. (Original) A method in accordance with Claim 11, wherein said deposition rate is at least 2300 Å/min.

13. (Original) A method in accordance with Claim 12, wherein said deposition rate is at least 3000 Å/min.

14. (Original) A method in accordance with Claim 1, wherein a deposition rate of said a-SiN_x :H dielectric film ranges between about 1000 Å/min and 2300 Å/min.

15. (Original) A method in accordance with Claim 1, wherein the variation in said film thickness over said substrate is less than about 16 %.

16. (Original) A method in accordance with Claim 1, or Claim15, wherein the atomic % of Si-H bonded structure is less than about 20 %.

17. (Original) A method in accordance with Claim 16, wherein the atomic % of Si-H bonded structure is less than about 15 %.

18. (Original) A method in accordance with Claim 1, wherein a wet etch rate of said film in a solution of 7 % by weight hydrofluoric acid, 34 % by weight ammonium fluoride, and 59 % by weight water at a temperature of about 25 °C is less than 800 Å/min.

19. (Original) A method of PECVD depositing an a-SiN_x :H dielectric film useful in a TFT device as a passivation dielectric, when a series of TFT devices are arrayed over a substrate having a surface area larger than about $1m^2$, said method comprising:

depositing said a-SiN_x :H dielectric film over a substrate which is at a temperature ranging from about 120 °C to about 340 °C;

depositing said a-SiN_x :H dielectric film at a process pressure which ranges between about 1.0 Torr to about 2.0 Torr;

depositing said a-SiN_x :H dielectric film from precursors including N_2, NH_3, and SiH4, and wherein a component ratio of NH_3/SiH_4 ranges from about 5.3 to about 11.1, a component ratio of N_2/SiH_4 ranges from about 5.8 to about 20.8 and a component ratio of N_2/NH_3 ranges from about 0.5 to about 3.9; and

applying a plasma to a mixture of said precursors, so that the plasma density in a process chamber in which said a-SiN_x :H dielectric film is deposited ranges between about 0.2 W/cm^2 and about 0.6 W/cm^2.

20. (Original) A method in accordance with Claim 19, wherein an electrode spacing in said process chamber ranges from about 400 mils to about 1000 mils.

21. (Original) A method in accordance with Claim 19 or Claim 20, wherein said substrate temperature ranges from about 240 °C to about 320 °C.

22. (Currently Amended) A method in accordance with Claim 19 or Claim 20, wherein said pressure in said process chamber ~~is less than~~ ranges from about 1.0 Torr to about 1.5 Torr.

23. (Original) A method of PECVD depositing an a-SiN_x :H dielectric film useful in a TFT device as a passivation dielectric, when a series of TFT devices are arrayed over a substrate having a surface area larger than about $1m^2$, said method comprising:

depositing said a-SiN_x :H dielectric film over a substrate which is at a temperature ranging from about 120 °C to about 340 °C;

depositing said a-SiN_x :H dielectric film at a process pressure which ranges between about 1.0 Torr to about 2.0 Torr;

depositing said a-SiN_x :H dielectric film from precursors including N_2, NH_3, and SiH4, and wherein a component ratio of NH_3/SiH_4 ranges from about 5.0 to about 8.0, a component ratio of N_2/SiH_4 ranges from about 5.0 to about 6.0 and a component ratio of N_2/NH_3 ranges from about 0.6 to about 1.2; and

applying a plasma to a mixture of said precursors, so that the plasma density in a process chamber in which said a-SiN_x :H dielectric film is deposited ranges between about 0.2 W/cm^2 and about 0.6 W/cm^2.